DEPARTMENT OF THE AIR FORCE
HEADQUARTERS OGDEN AIR MATERIEL AREA (AFLC)
HILL AIR FORCE BASE, UTAH 84401

REPLY TO ATTN OF: MML

OCT 28 1971

SUBJECT: Procurement Coordinating Team Meeting, MLT 1540 Light Table Problems (Your Msg 191350Z Oct 71)

TO: Hq USAF/INYMA

In lieu of sending a representative to subject meeting, we are providing a summary of maintenance problems and recommendations to be considered for any future procurement of this equipment.

a. Maintenance problems.

(1) Power Cord, P/N 600412: During acceptance testing, the cord reel unit overheated. It was necessary to fully extend the cord from the reel unit to prevent damage. We are currently negotiating with the contractor to obtain a new reel unit with a larger cable under terms of the warranty.

(2) Bias Card Assy, P/N 600171: One unit failed due to low wattage resistors. Redesigned card assemblies, with higher wattage rating resistors, shipped to user to replace all card assemblies in use.

(3) Film Drive Heat Sink P. C. Board, P/N 600149: The film drive speed control became inoperative after 56 and 103 hours of operation. The trouble was isolated to Transistors, P/N 7105, on heat sink P. C. board. We are negotiating with the contractor to obtain a fix under terms of warranty.

(4) Difficulty in maintaining focus of stereoscope using 2X lens for 60X magnification: Design specifications require stereoscope maintain focus through .0075 inches of lateral movement. This requirement can be met only through the use of the 1X lens for 30X magnification. Utilizing the 2X lens for 60X magnification limits lateral movement to .002 inches. Investigation of this problem is being delayed pending availability of a light table for engineering evaluation.

(5) Technical data: Lack of adequate technical data impeded maintenance because components/parts could not be readily identified. In many cases the contractor had to be provided with descriptions of the item, and application/location, to facilitate identification.

(6) Shipping damage: Some shipping damage, caused by the difficulty to adequately secure the light table to the elevating stand, was experienced. This problem could be alleviated by inserting bolts through the arms of the elevating stand and into the legs of the light table.

b. Recommendations.

(1) The optical instrument carriage should have a bumper system which will absorb shocks as the carriage is moved to the extreme in both X and Y axis. The present interim rubber stops are unsatisfactory.

(2) The gear ratio in the elevating mechanism should be lowered. The present ratio may be satisfactory for motorized operation, but it is too slow for manual operation.

(3) The control boxes should be relocated to eliminate operator knee interference. The control boxes, as presently located, are also very vulnerable to damage when the table is moved.

(4) An electric, on/off push button, operated carriage lock system should be incorporated on the table to preclude the necessity of securing the shipping lock screws each time an optical instrument position is established.

(5) The light source has an objectionable flicker below the 500 ft-L intensity. This should be improved to meet the minimum 200 ft-L specification requirement.

(6) Ultra-thin base film will not track on the present motorized film drive system. This capability should be available on future tables.

(7) The sliding guides should be eliminated when viewing 70MM film.

(8) The metal-to-glass bonding of contact assemblies on illumination lamps is inadequate. Numerous lamps had to be replaced during acceptance testing.

(9) The viewing surface elevation adjustment screw should be covered or capped to facilitate adjustments and reduce the wear and gouging of the frame on the edge of the viewing surface glass.

(10) Fasteners on the bottom cover should be replaced and relocated for ease of operation and accessibility. The bottom cover should also be reinforced to prevent sagging.

(11) Acceptance testing should be accomplished at the contractor's facility.

(12) The contractor should package and deliver direct to the user or OOAMA for storage.

c. New and less expensive community light table.

(1) We recommend AFSC/ASD be solicited for design features to be incorporated in this table.

(2) We further recommend the Air Force be given the opportunity to include technical data and spares requirements on future procurements so data and spares will be delivered concurrently with the delivery of the end item, to minimize support problems and maintain operational readiness of using activities.

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